

SEQUENCE LISTING

<110> Schall, Thomas J.
Penfold, Mark E.T.
ChemoCentryx, Inc.

<120> Methods and Compositions Useful for Stimulating an
Immune Response

<130> 019934-001610US

<140> US 10/061,943

<141> 2002-02-01

<150> US 60/265,925

<151> 2001-02-02

<160> 34

<170> PatentIn Ver. 2.1

<210> 1

<211> 1020

<212> DNA

<213> Rhesus cytomegalovirus

<220>

<223> rhesus monkey (Macaca mulatta) cytomegalovirus
(rhCMV) short unique region 28.1 (rhUS28.1) coding
sequence

<400> 1

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tgcacgtgtg tagtcaagaa acgcaaaact cgatattcca gcgatgttta tttttccac 180
gcctctatgg ccgacctcgt cagcactgtc atgctaccgc tctggctaca ttatgtcctc 240
aactttgccc aactctctcg aggagcctgt atcagctttt cggtgacttt ctatgttccc 300
cttttcgttc aggcctgggt actcatttcc atcgctatgg agcgatattc caacttagta 360
tggatggcac ccattagcgt taagacggcc tttaaacact gcataggaac ctggatcgta 420
tctgccttcg tggcatcacc ctactacgca tacagaaact cacacgacga acacgaatgc 480
attctaggaa actacacttg gcacattaac gaaccgctac acacgtgtat ggatgtgggtg 540
atcatagtat ggaccttttt ggccccagta ctggtaacca ttatagcaag cgtcaaaatg 600
agacgaacga cctggggcaa tactagggtta aacgaaaaga acagcgacat tcttatagta 660
ctagttgtca tgacagtgtt cttttgggga ccgtttaata tcgtgttggt tattgacaat 720
attttacaga gatactatga taccacgaat tgcgatgtag aaaagattaa acatatcatg 780
gctatgatct cagaagccat tgtttatatt cgcggtatta cagcacctat tatttatgta 840
gggattagtg gcagatttcg cgaagagatt tactctctgt ttagacgcca gccgtataac 900
gatttggaac ccgatgcaa tcaattcatg attgaactca ctagccaggg aagaagtaga 960
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<210> 2

<211> 1002

<212> DNA

<213> Rhesus cytomegalovirus

<220>

<223> rhesus monkey (Macaca mulatta) cytomegalovirus
(rhCMV) short unique region 28.2 (rhUS28.2) coding
sequence

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<400> 2
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atacttttgg ttttgttcac gagacgcata cactggttcg caaatgacat ctactatctc 180
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ctgaattaca cacaactctc acactatgcc tgcattgctc tatcatttgt tttttacgtt 300
tccattttta ttcaagctga ctttatggta gcagtggcta tcgagcggtta tcgaagccta 360
gtgaaaaaca aacccttag cgtaaaaaaa gccagcgta gctgcgcgtg catctggatc 420
attgttatta tagtgtcttc accatactac atgttttagat cgcaacacga aacaaattct 480
tgcattctag gaaactacac ctggcatatg aacagtcctt ttcgcaccac aatggacgca 540
tccattaaca tttgggtctt tgctgttccg gccgtgacga ccttggttaat agccagacga 600
atztatgtat gtacttcagg caacaaaaaa atgaacgcca gagccagtgg tttgttagag 660
gccatgggtga ttagcatgtt attcttcgga ggacttttca acctgaacat ctttcgagac 720
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attcgcattg tcggtgtggc cctcgtttac gggcgcgcta tattcaaccc ttttatgtat 840
atgtgtgtga gtaccagatt gcgccaagaa ataaaatgtt tgtttatgcg aataccttat 900
gaaacactag atgcagaaca cgctaaactc atgggttaatt taaaaaacag aaatgctaatt 960
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<210> 3
<211> 1014
<212> DNA
<213> Rhesus cytomegalovirus

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<220>
<223> rhesus monkey (Macaca mulatta) cytomegalovirus
      (rhCMV) short unique region 28.3 (rhUS28.3) coding
      sequence

```

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<400> 3
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atttgtctgc tcagcgtgct cgtcgtgaaa cgcaagctca agtttcgcaa tgacatttac 180
tttttcaacg cgtctttggc agacgttttt gccgtctgca tgttgccgc ctgggttaac 240
tatgcactgg actccacaca acttagcaag ttctcatgta tcacttttac gtttggtttt 300
tacgtctccc tgttcatcca ggcctggatg ctcatctctg tcaccctgga gcgatacggg 360
tctctagtct ggatcgcccc gatcaccaga aacaaagcca tagcgaattg tgtactcttt 420
tggcttggtt ccatcttctt ggccgcacct tactactctt ttagaaacga aagcaacgaa 480
caccaatgca tcatgagaaa ctatacctgg agcgttggtg aaacatggca catagccctg 540
gattttcttaa ttacgctcat tacattttat atgccagtga ctatttgtgt agctctgagt 600
ttcaaaatgg ccagatggtc aacctttggt tacagaaaacc tcaccagcag aaccagtctt 660
atccttattt tgatactgac agtagcagca gggttctggg gaccttttca cctatttatg 720
tttatagaaa acgtggcagg gcagatttac cacattcaaa aggattgctg gtacttacag 780
ctcagacact tgtgtagctt gatgaccgaa accctagtgt ttctacgttc agtttttaac 840
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cgtactcagt atgatgcttt ggacacgact cagtttagcag aaactatgca gctgaaagcg 960
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```

```

<210> 4
<211> 987
<212> DNA
<213> Rhesus cytomegalovirus

```

```

<220>
<223> rhesus monkey (Macaca mulatta) cytomegalovirus
      (rhCMV) short unique region 28.4 (rhUS28.4) coding
      sequence

```

```

<400> 4
atgaattcga gccagcacaa cataagcgtg tttctctcca ttggagcagg gcccgtcatt 60
accggataca cgtgcggttt tctgttcggg attctgggac acttttactt gtattggaaa 120
aaccatcaga gacgacaccg gacaaacagt ttcagtgatg ttttatttcg acatctcatg 180
atcaccgaag aggtctttac cctcaccatt cccgtctggg cgtatcactt aactactcac 240
ggcaacttac cgggctcgtg gtgccgaagt ctcaccttcg ttttttatct aacgggtattc 300
gctcgtgcct tcttttacct gctcctcatc tgggaccgat acagcgtaat catctgcaga 360
caccctctcc ccgttaatct gaactacagt cagggtcatag gcctgtctgt ctggctgggt 420
gccgtactgt cagcatcacc gttctccatt tttaacggaa gtgtgaaaca atgcctgggc 480
aacatgggca gcataccag cgaatcgtct gccgttctta acctggaagt gcacctgtgc 540
tccttctggg taccgctcat catgtcggct aactgttact accaagcaaa acgccgagca 600
tcgctgacc aactccacga actttacoga tgcagtttgc taattaccat tatcacaact 660
tacgctatcg tatggtttcc tttccatctc gctttactca tagacgccct gattagcata 720
agccatgtag aacctcttag cgctctccac tgggcatcca ttgtcgttac ctgtaaatca 780
tttacatttg tatatgcggg cataagccca ctagtgtatt tcacatgctg cccaccgta 840
cgtcgcgaac tgctgatgtc tctacgtcca ttcttcacct ggatttccag caaaacgcgg 900
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aagtcaccgc acctgttaaa cgaataa

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<210> 5
<211> 1452
<212> DNA
<213> Rhesus cytomegalovirus

```

```

<220>
<223> rhesus monkey (Macaca mulatta) cytomegalovirus
      (rhCMV) short unique region 28.5 (rhUS28.5) coding
      sequence

```

```

<400> 5
atgactacca ccacaatgag tgctaccacg aattccagta ccacgcctca agcaagcagc 60
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ctgacaacga tatcaacaac ttctaattgt accagcataa cgtctaattt aagcactacc 180
ggaaacaaaa ctgcaactac caatgtctact accttcagtt ccacattaac aacatctaca 240
aatataagca gtacattttc gacagtttct accgtcgcat ccaatgcaac atgtaattct 300
acaatcacia cgaatattac aactgctttt actacagcag caaacactac cgcaagcagc 360
ctcaccagca tcgtaacttc acttgccact accattgaaa ccacatcatt tgattatgat 420
gagtcagcag aagottgcaa cttaacagac atcgttcata ctactagatc agtgacagtt 480
actttctata ctatcatatt catactcggc cttttgggaa actttctggg tcttatgacc 540
atcatttgga accgtcgcat ttcttttatg gttgaaatat atttcgttaa tctagcaatc 600
tcgcatctta tgtttgatg tactttacca ttttgataa tgtatcttct tgagcacgac 660
gtcatgtcac atgcactctg tgtagcaatg acagccattt tttattgccc gctgtttgcc 720
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gaaaaagcaa atagacgttt attgcgcaat gctgtttctg gatgcatgct catgtgggga 840
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tttttaattt ga

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<210> 6
 <211> 990
 <212> DNA
 <213> Rhesus cytomegalovirus

<220>
 <223> rhesus monkey (Macaca mulatta) cytomegalovirus
 (rhCMV) long unique region 33 (rhUL33) coding
 sequence

```
<400> 6
atgaccaatc tttactctgc caattttctc accttgatag tacttccttt tateggtttta 60
agcaatcaac acctttttacc tgccagtgc gtaacctgta aatttctctc cctgttgtag 120
tactctagct gcagcgtagg ttttgctaca gtggcactga tagcggccga ccgataccga 180
gtgattcacc gccgaactca agctcgccaa tcctaccgta acacatatat gatagtaggc 240
ttaacgtggc tcattggctt gatctgcgct acccccgggg gggctctacac aaccattgta 300
gctcaccgag atgggggaaag tgatgctcaa agacacaata cttgcattat gcactttgag 360
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gtgccagttg tcatgatgag ctgggttttac gcgttttttt acaatactgt acaaagaaca 480
gccaaaaaac aacaacgtac gttgaaattc gtaaaggat tactcctgtc attcatcatc 540
atccaaactc cctatgtgtc aatcatgatt ttaaacacgt atgccaccgt aggatggccg 600
atggaatgag ccgatctaac tagacgccga gtcatacaac cgttttcccg tctcgtcccc 660
aatctacatt gcattggtcaa ccccatcctc tacgctctca tgggaaatga ctttgtgtct 720
aaagtggggc aatgcttttcg gggggaactc acgaaccgtc gaacttttct gcgttccaag 780
caacaagccc gcaactcggg cgatgtaccg acaattgtca gtcaacaacc cgccacaccc 840
accatcgta ataagcccga aaaaaacccg cacgtaaaac gcggtgtatc tttcagcgctc 900
agcgcatctt ccgaactcgc agcggccaaa aaagccaaag acaaagccaa gcggctttcc 960
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```

<210> 7
 <211> 1328
 <212> DNA
 <213> Rhesus cytomegalovirus

<220>
 <223> rhesus monkey (Macaca mulatta) cytomegalovirus
 (rhCMV) long unique region 33 (rhUL33) spliced
 coding sequence

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ttatggaaac cattcttcac aaccgaacga gtgaaactaa ttccattttg cacatcaaca 180
ccacctgcaa tgtgaccgac tcaactgtac ccgccaaact aggcgaagcc ctctgaaca 240
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gggaactcac gaaccgtcga acttttctgc gttccaagca acaagcccgc aactcggacg 1140
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aaaacccgca cgtaaaacgc ggtgtatctt tcagcgtcag cgcattctcc gaactcgcag 1260
cggccaaaaa agccaaagac aaagccaagc ggctttccat gtcccaccaa aacctacgtc 1320
tgacgtga                                     1328

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```

<210> 8
<211> 1140
<212> DNA
<213> Rhesus cytomegalovirus

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```

<220>
<223> rhesus monkey (Macaca mulatta) cytomegalovirus
      (rhCMV) long unique region 78 (rhUL78) coding
      sequence

```

```

<400> 8
atgattacgg agcgcgtcct cgcaggcatc ctccgcccga tgacggccgc ggggagtttg 60
gtcattctcc tcgcggttgt tatgtggttg aacatgtag atcgcgctgg catgccaatg 120
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<210> 9
<211> 2100
<212> DNA
<213> Rhesus cytomegalovirus

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<220>
<223> rhesus monkey (Macaca mulatta) cytomegalovirus
      (rhCMV) long unique region 33 (rhUL33) splice
      variant segment that extends 1000 nucleotides
      upstream and 200 nucleotides downstream of the
      rhUL33 reading frame

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<220>
<221> exon
<222> (603)..(752)
<223> exon 1

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<220>
<221> intron
<222> (753)..(830)

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<220>
 <221> exon
 <222> (831)..(2006)
 <223> exon 2

<220>
 <221> misc_feature
 <222> (1017)..(2006)
 <223> unspliced gene

<400> 9
 cgGCCAagat gtccCAagag gttctgacat gaacaatcac ttttccgaga tagatgagtt 60
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 gtatttcgaa catattgtta gatatagcta gtaaagaatc ttctaaagcc atgacgtctt 180
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 ccaatcttta ctctgccaat tttctcacct tgatagtact tccttttatc gttttaagca 1080
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<210> 10
 <211> 6
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:human
 cytomegalovirus (HCMV) long unique region 146
 (UL146) CXC (alpha) chemokine homolog (vCXCl)
 clinical strain conserved structural motif

<400> 10
Glu Leu Arg Cys Xaa Cys
1 5

<210> 11
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:human CMV
strain AD 169 AD27/28 PCR amplification primer
AD27up

<400> 11
gtgaattcgg ttggttcccc gtgttt

26

<210> 12
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:human CMV
strain AD169 AD27/28 PCR amplification primer
AD28low

<400> 12
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32

<210> 13
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<220>
<223> Description of Artificial Sequence:human CMV
strain AD169 AD27/28 PCR amplification primer
AD28up

<400> 13
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31

<210> 14
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<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:human CMV
strain AD169 AD27/28 PCR amplification primer
AD29low

<400> 14
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26

<210> 15
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 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:human CCR7
 receptor CCR7.1 PCR amplification primer ccr7up

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 <210> 16
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 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:human CCR7
 receptor CCR7.1 PCR amplification primer ccr7low

 <400> 16
 tggaattcag aagagtcgcc tatggg 26

 <210> 17
 <211> 34
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:mouse CMV PCR
 amplification primer S78.1

 <400> 17
 ataagaatgc ggccgctcga ctacatgctg ctgc 34

 <210> 18
 <211> 30
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:mouse CMV PCR
 amplification primer S78.2

 <400> 18
 cggaattccg tccggctgct gcgcttcttc 30

 <210> 19
 <211> 35
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:mouse CCR7
 receptor (mCCR7) PCR amplification primer mCCR7up

<400> 19
 ataagaatgc ggccgctgac ccagggaaac ccagg 35

<210> 20
 <211> 33
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: murine CCR7
 receptor (mCCR7) PCR amplification primer mCCR7low

<400> 20
 cggaattccg tcagctcctg ggagaggtcc ttg 33

<210> 21
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: human CMV
 strain AD169 PCR amplification primer 108 up

<400> 21
 gcggtaccgc gacgccgtcg ctggg 25

<210> 22
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: human CMV
 strain AD169 PCR amplification primer 108 low

<400> 22
 tggatccgtc agggaaatac aag 23

<210> 23
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: human CMV
 strain AD169 PCR amplification primer 109 up

<400> 23
 atggatcctc ttctatcacg gtggc 25

<210> 24
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:human CMV
 strain AD169 PCR amplification primer 109 low

<400> 24
 gcggatccag gatcgatttc gtgcg 25

<210> 25
 <211> 28
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:Bacillus
 anthracis protective antigen (BAPA) PCR primer
 BAPAp

<400> 25
 ggcccgggga agttaaacag gagaaccg 28

<210> 26
 <211> 27
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:Bacillus
 anthracis protective antigen (BAPA) PCR primer
 BAPAlow

<400> 26
 gggatatcctt accttattcct atctcat 27

<210> 27
 <211> 70
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:complementary
 oligo containing Ig kappa leader sequence

<400> 27
 ctagcatgga gacagacaca ctcctgctat ggggtactgct gctctgggtt ccaggttcca 60
 ctggtgacct 70

<210> 28
 <211> 70
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:complementary
 oligo containing Ig kappa leader sequence

<400> 28
 ccgggggtca ccagtggaac ctggaaccca gagcagcagt acccatagca ggagtgtgtc 60
 tgtctccatg 70

<210> 29
 <211> 29
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:rhesus CMV
 strain Rh68.1 Rh32/33 PCR amplification primer
 Rh32up

<400> 29
 cggaattcct ctttagtcgg cagggtctt 29

<210> 30
 <211> 29
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:rhesus CMV
 strain Rh68.1 Rh32/33 PCR amplification primer
 Rh33low

<400> 30
 ctggatccgt ggctttgtct ttggctttt 29

<210> 31
 <211> 28
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:rhesus macaque
 SLO RhCMV immediate early 2 gene nested PCR primer

<400> 31
 gccaatgcat cctctggatg tattgtga 28

<210> 32
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:rhesus macaque
 SLO RhCMV immediate early 2 gene nested PCR primer

<400> 32
 tgcttgggga atctctgcac 20

<210> 33
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:rhesus macaque
SLO RhCMV immediate early 2 gene nested PCR primer

<400> 33
cccttcctga ctactaatgt ac 22

<210> 34
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:rhesus macaque
SLO RhCMV immediate early 2 gene nested PCR primer

<400> 34
ttggggaatc tctgcacaag 20